

PATENT CLAIMS

1. Process for the nitration of aromatic or heteroaromatic compounds, characterised in that the aromatic or heteroaromatic compound in liquid form or in solution is mixed intensively and allowed to react with a liquid or dissolved nitrating reagent, selected from the group consisting of dilute nitric acid, 100% nitric acid, potassium nitrate in 100% sulfuric acid, mixtures of nitric acid and sulfuric acid ("nitrating acid"), nitric acid esters, mixtures of nitric acid with inorganic and organic anhydrides and dinitrogen pentoxide, in a microreactor for an adequate residence time, and the desired nitration product is isolated from the resultant reaction mixture.
2. Process according to Claim 1, characterised in that the microreactor used is a heatable flow reactor.
3. Process according to Claims 1 and 2, characterised in that the process is continuous.
4. Process according to Claims 1 to 3, characterised in that
- a) the aromatic or heteroaromatic compound is firstly derivatised,
 - b) the resultant derivative is dissolved in a solvent and
 - c) nitrated in a micromixer using a nitrating reagent, and
 - d) the nitrated product is isolated from the resultant solution.
5. Process according to one or more of Claims 1 to 4, characterised in that the nitrated product is separated off from the reaction mixture by extraction with a solvent.
6. Process according to one or more of Claims 1 to 5, characterised in that the reaction mixture flows through the microreactor at an adequate flow rate of from 1 $\mu\text{l/min}$ to 10 ml/min, and the reaction is carried out at a temperature in the range from -40 to 150°C, with the course of the reaction being monitored by gas chromatography.
7. Process according to Claim 6, characterised in that the reaction mixture flows through the microreactor at a flow rate of from 5 $\mu\text{l/min}$ to 1 ml/min, and the reaction is carried out at a temperature in the range from -10 to

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80°C, with the course of the reaction being monitored, if desired, continuously, by gas chromatography.

- 50k
Q2₅
8. Process according to Claims 4 to 7, characterised in that an aromatic or heteroaromatic compound is converted into a carbamate in a first reaction step.
9. Process for the nitration of aromatic or heteroaromatic compounds selected from the group consisting of toluene, 1,2,3,4-tetrahydroisoquinoline, N-methoxycarbonyl-1,2,3,4-tetrahydroisoquinoline and benzofuran derivatives according to one or more of Claims 1 to 8.
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